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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/913,838	01/07/2002	Mathias Agnely	022701-942	5506

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EXAMINER
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YOON, TAE H

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 11/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

(2) 4

<b>Office Action Summary</b>	<b>Application No.</b> 09/913,838	<b>Applicant(s)</b> AGNELY ET AL.	
	<b>Examiner</b> Tae H Yoon	<b>Art Unit</b> 1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 10-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____.  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____. | 6) <input type="checkbox"/> Other:  |

### DETAILED ACTION

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-9, drawn to a process for the preparation of a latex by using Raman spectroscopy.

Group II, claim(s) 10-17, drawn to a device.

The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the different optical fiber for the conveying and the reconveying for the device is not needed in Group I, for example, and the use of *in situ* Raman technique in measuring various properties such as contaminants is well known as taught by US Pat. 4,802,761.

During a telephone conversation with Ms. Ray on October 28, 2003 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-9.

Affirmation of this election must be made by applicant in replying to this Office action.

Claims 10-17 are withdrawn from further consideration by the examiner, 37

CFR 1.142(b), as being drawn to a non-elected invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 1714

Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recited "kind" in line 2 of claim 1 is indefinite and deletion is suggested. The recited "derivatives" in claim 3 and 4 is indefinite absent particular functional groups or substituents.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Saeki et al (US 4,613,649), Waite (US 4,802,984) or de Vos (US 5,312,847).

Saeki et al teach latex polymers in example. Waite (table 1) and de Vos (col. 7, lines 26-35) teach the same. An invention in a product-by-process claim is a product,

Art Unit: 1714

not a process. See In re Brown, 459 F2d 531, 173 USPQ 685 (CCPA 1972) and In re Thorpe, 777 F2d 695, 697, 227 USPQ 964 (Fed. Cir. 1985). Thus, the instant invention lacks novelty.

Claims 1 and 6-9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Feng et al (Characterization of styrene polymerization in microemulsions by Raman Spectroscopy, Colloids and Surfaces, 53 (1991) 349-361).

Feng et al teach characterization of styrene polymerization in microemulsions by Raman Spectroscopy using the incident light of 514 nm at page 352, Experimental. The use of the calibrated data for optimization is taught at page 351, lines 14-23. Wave number  $1632\text{ cm}^{-1}$  is seen in Figure at page 354. Thus, the instant invention lacks novelty.

Claims 1-3 and 6-9 are rejected under 35 U.S.C. 103(a) as obvious over Feng et al (Characterization of styrene polymerization in microemulsions by Raman Spectroscopy, Colloids and Surfaces, 53 (1991) 349-361) in view of Adar et al (Raman Spectroscopy for Process/Quality Control, Applied Spectroscopy Reviews, 1997, pp. 45-1-1, vol. 32) or Claybourn et al (Analysis of Process in Latex Systems by FT Raman Spectroscopy, Journal of Raman Spectroscopy, 1994, pp. 123-129, vol. 25).

The instant invention further recites FT or optical dispersive Raman over Feng et al. However, the advantage of using said FT or optical dispersive Raman is well known

Art Unit: 1714

as taught by Adar et al (pages 56-57) and Claybourn et al (conclusions). Adar et al also teach that the use of dispersive Raman is well known at page 64.

It would have been obvious to one skilled in the art at the time of invention to utilize the art well known advanced Raman Spectroscopy, FT or dispersive, in Feng et al with teaching of Adar et al or Claybourn et al since its advantage is well documented.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as obvious over Feng et al (Characterization of styrene polymerization in microemulsions by Raman Spectroscopy, Colloids and Surfaces, 53 (1991) 349-361) in view of Adar et al (Raman Spectroscopy for Process/Quality Control, Applied Spectroscopy Reviews, 1997, pp. 45-1-1, vol. 32) or Claybourn et al (Analysis of Process in Latex Systems by FT Raman Spectroscopy, Journal of Raman Spectroscopy, 1994, pp. 123-129, vol. 25, and further in view of Saeki et al (US 4,613,649), Waite (US 4,802,984) or de Vos (US 5,312,847).

The instant invention further recites styrene/butadiene latex over Feng et al, Adar et al and Claybourn et al. However, said styrene/butadiene latex is well known in the art as taught by Saeki et al, Waite and de Vos.

It would have been obvious to one skilled in the art at the time of invention to utilize the art well known advanced Raman Spectroscopy, FT or dispersive, in Feng et al with teaching of Adar et al or Claybourn et al and further to utilize said Raman Spectroscopy in polymerization of styrene/butadiene latex taught by Saeki et al, Waite or de Vos since Feng et al teach the use of said Raman Spectroscopy in an emulsion

Art Unit: 1714

polymerization of styrene and since said styrene and styrene/butadiene are well known for the latex.

Claims 1-3 and 6-9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Adar et al (Raman Spectroscopy for Process/Quality Control, Applied Spectroscopy Reviews, 1997, pp. 45-1-1, vol. 32).

Adar et al teach the use of Raman Spectroscopy in controlling an emulsion polymerization at page 77, H. Polymers and Polymerization. The use of the C=C band at  $163\text{ cm}^{-1}$  is taught at page 79, J. Thermoplastic. Calibrated data are seen in Figures at page 81, and thus the use of said data during said emulsion polymerization would be an inherent practice. Adar et al also teach the instant wavelengths, between 650 and 805 nm (page 55, lines 1-4) and FT and dispersive Raman (pages 56-57 and 64). Thus, the instant invention lacks novelty.

Claims 1-9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Adar et al (Raman Spectroscopy for Process/Quality Control, Applied Spectroscopy Reviews, 1997, pp. 45-1-1, vol. 32) and Nielsen et al (US 6,175,409) and further in view of Saeki et al (US 4,613,649), Waite (US 4,802,984) or de Vos (US 5,312,847).

Nielsen et al teach the use of libraries of polymerization product mixtures (calibrated data) and various emulsions at col. 10, line 14 to col. 11, line 36, col. 14, line

Art Unit: 1714

8 to col. 16, line 19 and in example. The recited styrene/butadiene latex is well known in the art as taught by Saeki et al, Waite and de Vos.

It would have been obvious to one skilled in the art at the time of invention to utilize the art well known calibrated data taught by Nielsen et al in the advanced Raman Spectroscopy, FT or dispersive, of Feng et al and further to utilize said Raman Spectroscopy in polymerization of styrene/butadiene latex taught by Saeki et al, Waite or de Vos since Feng et al teach the use of said Raman Spectroscopy in an emulsion polymerization of styrene and since said styrene and styrene/butadiene are well known for the latex and since the use of libraries of polymerization product mixtures (calibrated data) in the spectroscopy is a routine practice in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tae H Yoon whose telephone number is (703) 308-2389. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (703) 306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Tae H Yoon  
Primary Examiner  
Art Unit 1714